



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

JAN 04 2001

EPA Region 5 Records Ctr.



247887

MEMORANDUM

REPLY TO THE ATTENTION OF

SUBJECT: ACTION MEMORANDUM - Request for an Emergency Removal Action at the Wentworth Mercury Site, Chicago, Cook County, Illinois (Site IDB5S8)

FROM: William W. Simes, On-Scene Coordinator
Emergency Response Branch - Section 3

TO: Richard C. Karl, Chief
Emergency Response Branch

THRU: Linda Nachowitz, Chief
Response Section 3

I. PURPOSE

The purpose of this memorandum is to request and document your approval to expend up to \$20,000 and to confirm your verbal approval for \$10,000 on October 31, 2000 and increase of \$10,000 on November 6, 2000 in order to mitigate threats to public health, welfare, and the environment at the Wentworth Mercury Site located in Chicago, Cook County, Illinois. The response action was necessary to mitigate the immediate threat to public health, welfare, and the environment posed by the release of metallic mercury in the Wentworth Mercury Site, a private residence located at 6557 Wentworth, Chicago, Cook County, Illinois (Site).

The emergency response action was conducted pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. § 9604(a)(1), as amended, by locating, recovering, and cleaning up mercury spilled in the residential home interior. The response action included the off-site disposal of the mercury and mercury-contaminated media (soil, concrete, etc.).

The Site required 4 on-site working days to complete. The removal action was considered an emergency due to the presence of metallic mercury in the basement and elevated mercury vapor levels throughout the house, which threatened the health and welfare of the occupants.

The Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID #ILN000508119

A. Physical Location and Description

The Wentworth Mercury Site is located at 6557 Wentworth, Chicago, Lake County, Illinois. The Site coordinates are latitude 41° 46' 32.0" north and longitude 87° 37' 49.6" west.

In Illinois, the low-income percentage is 29% and the minority percentage is 25%. To meet the Environmental Justice (EJ) concern criteria, the area within 1 mile of the site must have a population that's twice the state low-income percentage or/and twice the state minority percentage. That is, the area must be at least 58% low-income and/or 50% minority. At this Site, the low-income percentage is 87.7% and the minority percentage is 100%, as determined by Landview III EJ analysis. Therefore, this Site does meet the Region's EJ criteria based on demographics as identified in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998".

B. Site Background

The family owns and resides at the Site. During restoration of the house a plumber had found mercury in a floor drain in the basement. On October 19, 2000, the owner contacted a United States Environmental Protection Agency (U.S. EPA) On-Scene Coordinator (OSC) and he and the Superfund Technical Assessment and Response Team (START) representative screened the house with a lumex meter. Air samples in the house tested at 29,000 parts per trillion (ppt) of mercury. Liquid metallic mercury was visible in the material taken from the floor drain.

The Site owners were advised to leave the residence and that all contractor work on the house would have to be delayed until the clean up was complete.

On November 1, 2000, U.S. EPA began decontamination procedures to remove the presence of elemental mercury from the Site. Prior to the removal action, U.S. EPA air monitored to establish baseline mercury concentrations throughout the house. As part of the removal action, U.S. EPA removed and field screened all the rooms in the house using a Lumex Mercury Detector. Using HGX solution and mercury vacuum cleaners, the house was cleaned for the presence of elemental mercury. U.S. EPA then collected post cleanup air samples. The basement floor was first vacuumed and then power washed with a HGX solution. All drains were power washed with HGX solution and the drain where the mercury was found was excavated and the soil was removed below the drain pipe. The excavation was then backfilled and the concrete was replaced. All decon water was captured and was disposed of appropriately.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Site presented a release and a potential threat of release of a CERCLA hazardous substance, presenting an imminent and substantial endangerment to the public health, welfare, and the environment, and met the criteria for an emergency removal action provided for in the National Contingency Plan (NCP), 40 C.F.R. § 300.415(b)(2). These criteria include:

- 1) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

This factor was present at the Site due to the presence of metallic mercury and the associated vapor levels posing a serious threat to the residents of the home. Mercury vapor levels in the residence were elevated well above (80 times) the ATSDR recommended removal action level of 300-1000 ppt. The potential also existed for the mercury to be tracked throughout the home, as well as to the outside and potentially to other residences, if it were not appropriately decontaminated and disposed.

Mercury poses a threat through inhalation, ingestion, and direct contact routes of exposure, and can result in severe nausea, vomiting, abdominal pain, bloody diarrhea, kidney and liver damage, and even death. Metallic mercury is highly toxic when inhaled, and attacks the central nervous system by destroying neurons.

Mercury is a characteristic waste under the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 *et seq.*, as amended, and 40 CFR § 261.24. Mercury exhibits the characteristic of toxicity D009, and is therefore a hazardous substance under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

- 2) The availability of other appropriate federal or state response mechanisms to respond to the release;

The Illinois Environmental Protection Agency did not have the financial resources and expertise to conduct a residential cleanup.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the suspected hazardous substances on-site, and the potential exposure pathways described in Sections II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may have presented an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

The purpose of this emergency removal action was to mitigate the immediate threats posed to the public health, welfare, or the environment by the presence of the metallic mercury and the associated elevated mercury vapor levels. Removal activities at the Site included the recovery of all metallic mercury from the residence, the identification and disposal of all mercury-contaminated media (carpeting, clothing, etc.) and the off-site disposal of all characterized wastes identified and collected during removal activities. Specifically, the following actions were performed:

- 1) Developed and implemented a site-specific health and safety plan, including an air monitoring plan;
- 2) Developed and implemented a Site security plan;
- 3) Confirmed and characterized the extent of mercury contamination in the house.
- 4) Removed and properly disposed of mercury-contaminated materials from the residence as necessary;
- 5) Decontaminated affected building floors and walls, drains and soils, and conducted air confirmation sampling to verify that the residence has been decontaminated to acceptable levels;
- 6) Transported and disposed of all hazardous substances, pollutants, wastes, or contaminants at a RCRA-approved disposal facility, in accordance with the U.S. EPA Off-Site Rule, 40 CFR § 300.440, 58 Federal Register 49215 (September 22, 1993); and
- 7) Restored the structural components destroyed or disposed of during the removal activities.

Removal activities required approximately 4 on-site working days to complete. The threat posed by the presence of metallic mercury and mercury vapor at the private residence met the criteria listed in § 300.415(b)(2) of the NCP.

The OSC has initiated planning for the provision of post-removal Site control, consistent with the provisions of § 300.415(l) of the NCP. The nature of this emergency removal action (complete removal of mercury and mercury-contaminated media from the Site) eliminated the need for any post-removal Site control.

The detailed cleanup contractor cost estimate is presented in Attachment 1 and estimated project costs are summarized below:

REMOVAL PROJECT CEILING ESTIMATE

EXTRAMURAL COSTS:

Cleanup Contractor	\$20,000
Contingency (15%)	<u>000</u>
Subtotal	\$20,000
Total START	<u>5,000</u>
Extramural Subtotal	\$2,500
Extramural Contingency (20%)	<u>0000</u>
TOTAL EXTRAMURAL COSTS	\$27,500

INTRAMURAL COSTS:

U.S. EPA Direct Costs [\$30 X (40 Regional Hours + 4 HQ Hours)]	\$ 1,320
U.S. EPA Indirect Costs (\$65 X 40 Regional Hours)	<u>\$ 2,600</u>
TOTAL INTRAMURAL COSTS	\$ 3,920 =====
TOTAL REMOVAL PROJECT CEILING ESTIMATE	\$31,420

The response actions described in this memorandum directly addressed the actual or threatened releases of hazardous substances, pollutants, or contaminants at this Site, which may have posed an imminent and substantial endangerment to public health, welfare, or the environment. These response actions did not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

Applicable or Relevant and Appropriate Requirements

All applicable, relevant, and appropriate requirements (ARARs) are being complied with to the extent practicable. Federal ARARs for this Site include RCRA. As the materials being dealt with were likely to be RCRA characteristic wastes, they were handled accordingly. An 8-hour air sample was taken and the results were found to be below the standard recommended by the Agency for Toxic Substance and Disease Registry.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the Site conditions, the nature of the hazardous substances documented on-site, and the potential exposure pathways to nearby populations described in Sections II and III above, actual or threatened release of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, would have presented an imminent and substantial endangerment to public health, welfare, or the environment.

VII. OUTSTANDING POLICY ISSUES

This removal action requires consideration of the nationally significant issue of cleanup of contaminants in residential interiors. This issue has been discussed with the Office of Solid Waste and Emergency Response Headquarters Staff, who concur that because residential mercury contamination can result in the release of mercury to the external environment, clean-up of these interiors is therefore appropriate.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this Site is contained in the Enforcement Confidential Addendum.

IX. RECOMMENDATION

This decision document represents the selected removal action for the Wentworth Mercury Site developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. This decision was based upon the Administrative Record for the Site (See Attachment 2). Because the conditions at the Site met the NCP § 300.415(b)(2) criteria for an emergency removal action, I recommend your approval of this removal action. The total project ceiling, if approved, will be \$20,000 of which, an estimated \$20,000 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE: Richard C. Karl DATE: 1-04-01
Chief, Emergency Response Branch

DISAPPROVE: _____ DATE: _____
Chief, Emergency Response Branch

Enforcement Addendum

Attachments

1. Detailed Cleanup Contractor Cost Estimate
2. Administrative Record Index
3. Region V EJ Analysis

cc: C. Beasley, U.S. EPA, 5202-G
M. Chezik, U.S. Department of the Interior, **w/o Enf. Addendum**
B. Everetts, IEPA, **w/o Enf. Addendum**

**BCC PAGE
REDACTED**

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

**ENFORCEMENT ADDENDUM
REDACTED**

(1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ATTACHMENT 1

DETAILED CLEANUP CONTRACTOR ESTIMATE
WENTWORTH MERCURY SITE
CHICAGO, LAKE COUNTY, ILLINOIS
OCTOBER 2000

The estimated cleanup contractor costs necessary to complete the removal action at the Newport Mercury House Site are as follows:

Personnel	\$ 7,000
Equipment	\$ 3,000
Subcontractors	\$ 9,000
Materials	<u>\$ 1,000</u>
TOTAL	\$20,000

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ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
WENTWORTH MERCURY SITE
CHICAGO, COOK COUNTY, ILLINOIS

ORIGINAL
DECEMBER 5, 2000

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	00/00/00	Ecology and Environment, Inc.	U.S. EPA	Site Assessment Report for the Wentworth Mercury Site (PENDING)	
2	00/00/00	Simes, W., U.S. EPA	Karl, R., U.S. EPA	Action Memorandum: Request for an Emergency Removal Action at the Wentworth Mercury Site (PENDING)	




ATTACHMENT 3
REGION V EJ ANALYSIS
WENTWORTH MERCURY HOUSE SITE

Region 5 Superfund EJ Analysis

Wentworth Mercury Site

Chicago, IL

EJ Identification

-  Low Income and Minority Less than State Average
-  Low Income or Minority at or Greater than State Average
-  Low Income or Minority 2 Times or Greater than State Average
[meets Region 5 EJ Case criteria]

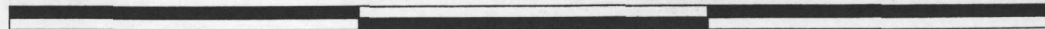
 Site Location

 Block Group Boundary

Region 5 EJ Case Criteria for Illinois
Minority: 50% or greater
Low Income: 58% or greater



0 0.2 0.4 0.6 Miles



U.S. EPA Region 5
Superfund Division



Date of Map: 11/15/00

Source of Map: 1990 Census Database

**INDEPENDENT GOVERNMENT COST ESTIMATE
REDACTED**

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NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION